CLAIMS

What is claimed is:

1. A method for managing a communications session with a device, the method comprising the computer-implemented steps of:

establishing, with the device, a communications session that supports a first quality of service level;

receiving a request for a service associated with the device;

determining, based upon the request for the service and policy criteria, a second quality of service level to be supported by the communications session for the device; and

modifying the communications session by causing a layer-2 change in a communications link used for the communications session, so that the communications session for the device supports the second quality of service level.

2. The method as recited in Claim 1, wherein:

the request for the service is received from a layer-2 gateway; and

causing a layer-2 change in a communications link used for the communications session, so that the communications session for the device supports the second quality of service level includes signaling the layer-2 gateway to change the communications session with the device to support the second quality of service level.

3. The method as recited in Claim 1, wherein causing a layer-2 change in a communications link used for the communications session, so that the

communications session for the device supports the second quality of service level, includes causing the modification of session context data at a layer-2 gateway.

4. The method as recited in Claim 1, wherein causing a layer-2 change in a communications link used for the communications session, so that the communications session for the device supports the second quality of service level, includes generating and sending to a layer-2 gateway an AAA Change of Authorization (CoA) Request command that specifies a quality of service profile for the second quality of service level.

5. The method as recited in Claim 1, wherein the first and second quality of service levels each specifies an amount of bandwidth to be allocated to the device.

6. The method as recited in Claim 1, wherein the device is a wireless device.

7. The method as recited in Claim 1, further comprising the computer-implemented steps of:

receiving, from a first application server, first quality of service data that specifies the second quality of service level;

receiving, from a second application server, second quality of service data that specifies a third quality of service level; and

modifying, based upon the first quality of service data and the second quality of service data, the communications session by causing a layer-2 change in a communications link used for the communications session, so that the communications session for the device supports a quality of service level other than the first quality of service level.

8. An apparatus for managing a communications session with a device, the apparatus being configured to:

establish, with the device, a communications session that supports a first quality of service level;

receive a request for a service associated with the device;

determine, based upon the request for the service and policy criteria, a second quality of service level to be supported by the communications session for the device; and

modify the communications session by causing a layer-2 change in a communications link used for the communications session, so that the communications session for the device supports the second quality of service level.

9. The apparatus as recited in Claim 8, wherein:

the request for the service is received from a layer-2 gateway; and

the apparatus is further configured to cause a layer-2 change in a communications link used for the communications session, so that the communications session for the device supports the second quality of service level by signaling the layer-2 gateway to change the communications session with the device to support the second quality of service level.

10. The apparatus as recited in Claim 8, wherein the apparatus is further configured to cause the modification of session context data at a layer-2 gateway.

11. The apparatus as recited in Claim 8, wherein the apparatus is further configured to generate and send to a layer-2 gateway a AAA Change of Authorization (CoA)

Request command that specifies a quality of service profile for the second quality of service level.

12. The apparatus as recited in Claim 8, wherein the first and second quality of service levels each specifies an amount of bandwidth to be allocated to the device.

13. The apparatus as recited in Claim 8, wherein the device is a wireless device.

14. The apparatus as recited in Claim 8, wherein the apparatus is further configured to:

receive, from a first application server, first quality of service data that specifies the second quality of service level;

receive, from a second application server, second quality of service data that specifies a third quality of service level; and

modify, based upon the first quality of service data and the second quality of service data, the communications session by causing a layer-2 change in a communications link used for the communications session, so that the communications session for the device supports a quality of service level other than the first quality of service level.

15. An apparatus for managing a communications session with a device, the apparatus comprising:

means for establishing, with the device, a communications session that supports a first quality of service level;

means for receiving a request for a service associated with the device;

means for determining, based upon the request for the service and policy criteria, a second quality of service level to be supported by the communications session for the device; and

means for modifying the communications session by causing a layer-2 change in a communications link used for the communications session, so that the communications session for the device supports the second quality of service level.

16. The apparatus as recited in Claim 15, wherein:
the request for the service is received from a layer-2 gateway; and
the apparatus further comprises means for causing a layer-2 change in a communications link used for the communications session, so that the communications session for the device supports the second quality of service level includes signaling the layer-2 gateway to change the communications session with the device to support the second quality of service level.

17. The apparatus as recited in Claim 15, wherein the apparatus further comprises means for causing the modification of session context data at a layer-2 gateway.

18. The apparatus as recited in Claim 15, wherein the apparatus further comprises means for generating and sending to a layer-2 gateway a Change of Filters (CoA) Request command that specifies a quality of service profile for the second quality of service level.

19. The apparatus as recited in Claim 18, wherein the apparatus further comprises means for specifying the quality of service profile for the second quality of service level using a vendor-specific attribute containing the the 3rd Generation Partnership Project 3GPP-Negotiated-QoS attribute.

20. The apparatus as recited in Claim 15, wherein the first and second quality of service levels each specifies an amount of bandwidth to be allocated to the device.

21. The apparatus as recited in Claim 15, wherein the device is a wireless device.

22. The apparatus as recited in Claim 15, further comprising means for:

receiving, from a first application server, first quality of service data that specifies the second quality of service level;

receiving, from a second application server, second quality of service data that specifies a third quality of service level; and

modifying, based upon the first quality of service data and the second quality of service data, the communications session by causing a layer-2 change in a communications link used for the communications session, so that the communications session for the device supports a quality of service level other than the first quality of service level.